

## ABSTRACT

An o-ring sealing device, molded with an imbedded piezoelectric element, for use in vacuum systems. The imbedded element, of a circumferential length, has an oblong cross-sectional shape, the oblong shape having a pair of ends for externally connecting to a signal processor. The piezoelectric element is concentrically disposed and centrally placed within a mold cavity of a predetermined diameter. The cavity is filled with an elastic material fully encapsulating and insulating the piezoelectric element.